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Journal of the Society of Arts.

FRIDAY, JUNE 1, 1866.

Announcements by the Council.

CONVERSAZIONE.

The Council have arranged for a *Conversazione* on Wednesday evening, the 13th June, at the South Kensington Museum, cards for which are now being issued.

FIFTEENTH ANNUAL CONFERENCE.

The Fifteenth Annual Conference between the Council and the Representatives of the Institutions in Union and Local Boards will be held on Wednesday, the 13th June, at Twelve o'clock, noon. WILLIAM HAWES, Esq., Chairman of the Council, will preside.

Secretaries of Institutions and Local Boards are requested to send, as soon as possible, the names of the Representatives appointed to attend the Conference, and a copy of the last Report of each Institution should be forwarded, by book post, without delay.

The Council will lay before the Conference the Secretary's Report of the Proceedings of the Union for the past year, and the Results of the Examinations, as well as the Programme of Examinations for 1867.

The following suggestions of Subjects for Discussion have been received from various quarters, it being understood that in putting them forward the Council express no opinion whatever upon them:—

1. The scheme of Elementary Examinations:—Whether the Society of Arts should continue to furnish Elementary papers to Unions and Local Boards, or whether it would be better for the Society to confine its attention exclusively to the Final Examinations?
2. Presuming the outline of the present scheme to be retained, whether any modifications in the details should be made, such, for instance, as

- (a.) To substitute the terms First and Second Divisions for "Higher and Lower Grades," and to award first, second and third class Certificates to successful Candidates.
- (b.) So to arrange the time-table that the Examinations shall not clash with those of the Science and Art Department.
- (c.) That English Grammar be added to the list of optional subjects.

3. What means can be adopted to secure a greater number of Female Candidates at the Elementary Examinations?

4. Whether the great City Companies and other analogous bodies might not be invited to co-operate with the Society in promoting the Education of Adults by special prizes for competition in subjects with which such companies are officially concerned, or among Candidates connected therewith?

5. Whether the co-operation which already exists between this Society and the Royal Horticultural Society for the promotion of Education among Gardeners, might not be extended to other societies, with a view to the better promotion of Education among other classes of working men?

6. Whether cheaper Text books could not be in some cases recommended to Candidates at the Final Examinations, or whether any means could be adopted for enabling them to have ready access to the more expensive ones?

7. Whether it would be desirable for the Council to endeavour to interest the clergy, gentry, and others in country districts, in the Society's scheme of Examinations, by issuing an explanatory address, and directing attention to the existence of Local Educational Boards?

8. How far employers in London and other large towns can be induced to aid the Educational scheme, by giving to young men in their employ special encouragement to join the Institution Classes?

9. How can Institutions promote competition for the Prizes offered by the Society of Arts in Art-Workmanship?

10. The possibility of establishing Museums of a simple character, to circulate throughout the country, in connection with Institutions and Evening Schools, on the plan adopted by the Science and Art Department for Schools of Art.

11. By what means can the Society of Arts promote the erection of suitable buildings for the use of Literary and Mechanics' Institutes?

12. In what way can the Society of Arts aid Institutions in securing the services of gentlemen qualified to give popular Lectures on Scientific Subjects?

13. Can a Literary Institute be so conducted as to provide rational amusement and the means of mental improvement for the various classes of society? And, if so, what appliances are necessary for the successful working of such an Institute?

14. The promotion of athletic exercises, especially in the metropolis and other large towns, by establishing Gymnasias or otherwise.

Notice of any other subjects which Institutions or Local Boards may desire their Representatives to introduce to the notice of the Conference should be sent to the Secretary of the Society of Arts.

Representatives of Institutions and Local Boards attending the Conference are invited to the Society's *Conversazione*, at the South Kensington Museum, on the evening of the same day (13th June), and will receive cards on application at the Society's House, on the day of the Conference.

Proceedings of the Society.

TWENTY-FOURTH ORDINARY MEETING.

Wednesday, May 30th, 1866; A. S. Ayrtton, Esq., M.P., in the chair.

The Paper read was—

ON SOME POPULAR ERRORS CONCERNING AUSTRALIA.

BY THE HON. CHARLES GAVAN DUFFY.

I propose to speak to-night of a country which is greatly misunderstood in England, and which England, I fear, is causing to be misunderstood by the rest of the world. I know of no two communities which bear so

strange and anomalous a relation to each other at the present moment as the Australian continent and the British islands. The conditions which ought to ensure mutual goodwill are unusually abundant. The population of that continent is not only from the same stock as your own, but consists in a large degree of men and women who within a few years were your fellow-citizens and neighbours. Its institutions are not only of the same general family, but are strictly identical with yours, wherever identity was not impossible. Its social customs and its intellectual enjoyments are the fondly-cherished habits of "home." Its material interests are so closely intermingled with yours that many kingdoms of Europe where ambassadors are maintained and special correspondents despatched to foster friendly relations, add less than it does to the annual accumulation of wealth and expansion of commerce in England. Within a dozen years more than four hundred thousand persons have left these islands to establish themselves there; and no four hundred thousand, taken at random from those who remained, have been so profitable customers to the merchants, manufacturers, and artisans of the common home, or have contributed so much to its prosperity. Moreover, it would be a great mistake to suppose that these emigrants consisted merely of the rank and file of an "army of industry." It is a rare thing now to meet with a single family of the middle classes which has not sent at least one recruit to Australia. When the lands were thrown open to pastoral occupation, and again at the period of the gold discovery, a multitude of younger sons of the gentry and professional classes flocked to it, as their ancestors had followed Raleigh to the then newest world. And many of the names which have been dearest to these islands in our own day are borne in Australia by descendants, or close collateral relatives of the men who made them famous. To take a few notable instances, there have been within the last ten years, and in most of the cases there are still among the Australian population, members of the families of Wordsworth, Coleridge, Arnold (of Rugby), Brougham, O'Connell, Jenner, Faraday, Babbage, Whewell, Stephen; or to come still closer to present tastes and sympathies, Dickens, Gladstone, Kingsley, William Carleton, Macready, Helps; or to take the immense community which is sometimes called the religious world—sons of Edward Irving and Baptist Noel, and a brother of Frederick Lucas hold public appointments in Melbourne; and every city on the continent could produce a list of the same character. Yet with all these common sympathies and interests there are few countries in the world of which the people of England have received impressions so erroneous and untrustworthy as the Australian colonies. The colonists recount with bitter pleasantries of grotesque mistakes, not merely in Australian politics, but in the cardinal facts of Australian geography, made from time to time by conspicuous writers and speakers in England. But they make cheerful allowance for imperfect information upon facts lying so far from the business of daily life, where the ignorance is not associated with arrogance or malice.

They are persuaded, however, and upon no light grounds I think, that the rivals and enemies of England are treated with less harshness of judgment than is habitually exhibited towards the colonists by many public writers in this country. Whatever is good is ignored or grudgingly admitted; whatever is not good is distorted and exaggerated out of all resemblance to the truth. Instead of regarding this great social expedition of our people to new regions with some of the interest and sympathy never denied to military expeditions—instead of recognising in their remarkable labours, in the cities which they have founded, the wealth which they have added to the storehouse of human comfort and prosperity, and the states which they have created and governed, conquests to be proud of, they are habitually represented as little better than the semi-barbarous and chaotic republics of South America. When one comes to inquire what is the root

of this prejudice, it will be found, I think, generally to spring from a belief that the Australians, having a great trust committed to them in the complete power of self-government, have abused it, and run riot in licentious excesses. It is amazing how wide-spread and deep-rooted this belief has become, considering the slender foundation upon which it rests. In what respect has government failed in Australia? Those who have had the duty of governing these communities for the last ten years consider that they were engaged in a deeply interesting and pregnant experiment, which has been conducted on the whole in a manner to deserve the applause—and not the censure—of thoughtful men. A community composed of the middle and lower classes attempted, practically, for the first time, to work the complicated machinery of the British Constitution, not only without the counterpoise supplied at home by the personal influence of the sovereign and of hereditary rank and wealth, but in connection with a franchise which, from the circumstances of the country, was necessarily nearly as wide as the adult male population; and yet to preserve completely intact the principles and the machinery of responsible government—the most marvellous system for accomplishing peaceably the wishes of a free people that mankind has framed.

Under these conditions colonial statesmen have undeniably preserved public order, maintained public credit and fostered national prosperity. They have so well preserved it that a man's life, liberty and property, are as effectually under the protection of law in the city of Melbourne as in the city of London; and, marvellous as the prosperity of England has been for the last ten years, it is less prosperous than Australia. In what respect, then, has Government failed? Public men have committed mistakes, of course, for mistakes are committed in all experiments; but these are the results which have been attained.

Whenever I have pressed any person prejudiced against Australia with this question, I have invariably found that political instability was what alarmed him; that he considered a ministerial crisis was the normal condition of Australia, and that we set up governments like nine-pins only for the pleasure of knocking them down again. I recently heard a man of distinguished ability, in one of the most memorable speeches delivered in the present House of Commons, declare that in Australia the stability of society, industry, property, and the well-being of the community, were endangered by constant changes of ministry, and that it would be necessary for their own safety to deprive the colonists of responsible government, and create a stable executive instead. I am well aware that party politics are forbidden here, and I have not the slightest disposition to obtrude them; but the government of colonies is a question of political science, and the primary condition of governing any community is to understand its actual condition. I would invite you, therefore, to look at Australia historically, putting the distance of place in lieu of distance of time, and to test by one or two instances how far this sort of popular belief is well founded. Is it true, in point of fact, that the Australian colonies have been signalized by constant, or even by unusually frequent, changes of government? I know the belief is all but universal in England; but I doubt if many of those who accept it have taken the trouble to inquire whether it is perfectly well founded. I copied recently, from a number of the late *National Review*, a statement of this character even stronger than Mr. Lowe's, and, as it was apparently made without any political object, I prefer to select it for analysis. In an article upon the American War (in the 26th number of the *Review*), the writer incidentally describes the experiment of establishing parliamentary government in Australia, and without taking any trouble to argue the question, delivers judgment as upon a point where the public mind was already made up:—

"It is, however (he says), only fair to observe that

the American Constitution has one great excellence at this moment, not indeed as compared with the English Constitution, but as compared with that degraded imitation of it which exists, for example, in our Australian colonies. In those governments the parliament is wholly unfit to choose an executive; *it has not patriotism enough to give a decent stability to the government; there are 'ministerial crises' once a week, and actual changes of administration once a month.* The suffrage has been lowered to such a point among the refuse population of the gold colonies, that representative government is there a very dubious blessing, if not a certain and absolute curse."

Here are not only general and sweeping imputations, but, fortunately, exact and specific statements. If an Australian, familiar with the facts, were to reply that the governments so savagely disparaged had work to do in founding and organising new states as serious as fell to the lot of any administration in Europe during the same period, and did that work in general effectually, to the satisfaction of the people who confided power to them; and further, that to mistake for confusion and chaos the vigorous action of new communities which appeared regular and well ordered to eyes familiar with the forces at work, was like the dogmatism of the deaf spectator of a waltz, who insisted that the performers were lunatics because he could not hear the music which gave meaning and harmony to their movements; moreover that this sort of thing and worse than this had been written in England of the first memorable Congress of the United Colonies of North America, with no benefit to any one concerned, but much evil; if, I say, an Australian made this sort of defence, though strictly true, it would, perhaps, amount to little. But in the language of the courts, I not only demur to the indictment, but join issue on the facts. I deny that these charges are true, and I propose to put them to the test. I am not going to inquire whether there are "ministerial crises once a week and actual change of administration once a month," but whether when the truth is known there is any just ground for wonder or complaint on this score.

The territory of Australia is nearly as large as civilized Europe, that is, Europe shorn of the frozen swamps and penal settlements of northern Russia. This territory is divided into five states possessing parliamentary government, which are politically as independent of each other, and geographically as separate, as the governments of England, France, Italy, Prussia and Austria. The neighbouring islands of New Zealand form a sixth state under parliamentary government; and the political news from these islands commonly reach Europe under the heading of Melbourne or Sydney, the chief ports of departure for European ships, and are confounded by ordinary readers with Australian news. It is easier to reach Paris and even Turin from London than to pass from the capital of any one of these states to the capital of its nearest neighbour. Berlin or Vienna is much nearer to London than the capitals of the colonies lying farthest apart are to each other. But whenever a change is announced in any of those separate governments, half the journals in England, and, it may be presumed, a proportionate number of politicians in clubs and reading rooms cry, "What! another ministerial crisis in Australia—will they never be quiet?" Perhaps they will add, with the *National Review*, "these people have a crisis once a week, and a change of ministers once a month." These criticisms in good time are carried across the ocean, and the colonists feel natural wrath and shame that cultivated men among their own kinsmen persist in making blunders about Australia, which a shepherd in the Australian "bush" would scarcely make with respect to European states.

This is the primary source of the common error on this subject. But it may naturally be asked, whether, after making due allowance on this score, there is not still an inordinate number of ministerial changes in

these new states. Let us see whether this is so or not. One of the states, Queensland, has only existed since December, 1859, but during that entire period of six years and a half there has been no change of ministry. Two or three individual members have left the government upon personal grounds, and been replaced by others of the same opinions, but there has been no political or party change whatever. Another of the states, Tasmania, has been under parliamentary government since 1855, but during these eleven years there have been only six administrations. Six administrations in eleven years I may be told are a great deal too many. I can only reply that England is the mother and model of representative governments; the colonies have no pretensions to be better than her in this respect, and in England during the same eleven years there have been exactly six administrations. New South Wales, the senior state, as a distinct colony, and as the seat of parliamentary institutions, has enjoyed responsible government for more than ten years, and it has had till quite recently for its prime minister a gentleman who, if prolonged tenure of office be a merit, may boast of having held that position in his colony for as many of these years as Lord Palmerston held it in England; with such occasional interruptions as even that fortunate statesman did not escape. And his most important competitor has held office during these years twice as long as Mr. Disraeli. But Victoria remains, the most populous, the most vivacious, and the most democratic of the Australian colonies, and the one commonly cited by English critics as the example of all Australian excesses.* For her case it will be necessary to go a little into detail. The constitution by which Victoria obtained the power of changing its government was proclaimed law in the colony in November, 1855. In the ten years and five months ensuing there have been eight administrations. Mr. Haines' administration existed from the proclamation of the Constitution to March 11, 1857—upwards of a year and a quarter. Mr. O'Shanessey's administration, from 11th March, 1857, to 28th April, 1857—only six weeks. Mr. Haines' second administration, from April 28th, 1857, to March 10, 1858—a year minus two weeks. Mr. O'Shanessey's second administration, from March 10, 1858, to October 26, 1859—upwards of a year and a half. Mr. Nicholson's administration, from October 24, 1859, to November 29, 1860—upwards of a year. Mr. Heales' administration, from November 29, 1860, to November 13, 1861—a year minus a few days. Mr. O'Shanessey's third administration, from November 13, 1861, to June 30, 1863—upwards of a year and a half. Mr. McCulloch's administration, from June 30, 1863, to April, 1866—two years and ten months; and it is still in power.

Omitting the purely exceptional case of the first O'Shanessey administration, this gives an average of a year and a half for each government; or, including that administration, we have an average of more than a year and a quarter; not an average of a month, as the *National Review* undertakes to affirm. And undoubtedly one main cause why governments have not been longer lived, is that public men sometimes resigned office too promptly—more promptly, and on less sufficient grounds, than the English practice justifies—because they were determined to keep high the standard of parliamentary responsibility. I may remark, in passing, that both the statesman and the reviewer, to whom I have been alluding, attribute the sudden changes of government which they charge on the Australians to the extension of the franchise. But this is manifestly a mistake;

* I have omitted the colony of South Australia because I am imperfectly acquainted with its public affairs, and because an unfortunate variance in its constitution from the ordinary practice, by which members of parliament accepting office under the crown in Free States are obliged to submit themselves to re-election, has caused a disturbing influence, the effect of which I find it difficult to calculate.

for the only very short-lived administration occurred before the franchise was extended; and in latter years, with an extensive franchise, each government has been longer lived than its predecessor. But a year and a quarter is a miserably short average duration for a ministry, it may be said, and argues, after all, that the colonial parliament has, in the words of the reviewer, "not patriotism enough to give a decent stability to government." The colonial parliament has given precisely such a decent stability to government as the English parliament has been in the habit of giving when it was not mastered by a great popular favourite, or managed by a skilful intriguer. The succession of long-lived English administrations in the Georgian era, commanding undeviating majorities in parliament, belonged to a period when parliamentary corruption constituted one of the chief agencies of government. As soon as the contest of opinion began to be fairly fought in the House of Commons ministries changed repeatedly, or endured only when backed by great popular enthusiasm. The exceptional good fortune of Pitt or Palmerston can scarcely be considered a fair standard to apply to colonial ministers; and the successful devices of Walpole or the Pelhams for tranquillising parliament are not a desirable model to propose for colonial adoption. But, under the ordinary laws of political action, English administrations, since responsible government has existed, were about as long-lived as colonial administrations. Instead of taking up the *Annual Register* for specific dates, I will borrow illustrations from two or three popular sources running through the last century.

The famous *Public Advertiser*, in July, 1766, a hundred years ago, contained a letter bewailing the short life and sudden death of governments in England. This letter is now known to have been written by Edmund Burke. Prior, in his memoirs of Burke, reprints it as his, and it bears evident marks of his strong hand.

"Since the happy accession of his present Majesty, to this day," says the letter, "we have worn out no less than five complete sets of honest, able, upright ministers, not to speak of the present, whom God long preserve. First we had Mr. Pitt's administration, next the Duke of Newcastle's, then Lord Bute's, then Mr. Grenville's, and lastly my Lord Rockingham's. Now, sir, if you will take a bit of chalk and reckon from the 7th of October, 1760, to the 30th of July, 1766, you will find five years nine months and thirty days, which, divided by five, the total of administrations gives exactly one year and sixty days each, on an average as we say in the city, and one day more if they have the good fortune to serve in Leap-year."

Five years later, Mr. Burke, in a speech in the House of Commons on the City of London Remonstrance,* speaking of the previous nine years, returns to this subject:—"During this period, sir, the direction of public affairs has been in no less a number of hands than Mr. Pitt's, Lord Bute's, Mr. Grenville's, the Marquis of Rockingham's, the Duke of Grafton's, and Lord North's, so that, if we were to divide the nine years equally between them, there would be just a year and a half for every separate administration."†

This was the era of the giants; the great age of Fox and Pitt, when, for public spirit and political ability, Parliament was at its zenith. Yet, some rash and censorious critic in the colonies, if he looked with the eyes of the scorner at the mother country, might discern no other moral in its eager contest for political principles, than that it had not "patriotism enough to give a decent stability to Government."

If we leap over the era of the Anti-Jacobins, when opinion was suppressed, and come to the period of real parliamentary struggle which immediately preceded and followed the passing of the Reform Bill, we have the same state of things recurring. Mr. Albany Fonblanque

many years ago re-issued a collection of his political writings in the *Examiner*, under the title of "England under Seven Administrations." The selection ranged from 1827 to 1835, during which period, in little more than eight years, the interests of England had been intrusted in succession to the Canning, Goderich, Wellington, Grey, Melbourne, Peel, and second Melbourne administrations. The average duration of a ministry was shorter in England during that period of political activity than it has been in Victoria; but it would scarcely be considered a liberal interpretation of this circumstance if a colonial critic declared that the Imperial Parliament had not "patriotism enough to give a decent stability to Government." It may be said, and it must be admitted, that these short-lived ministries in England belong to periods in some sense exceptional. But do not the short-lived ministries in Australia also belong to an exceptional period? They belong to the period when self-government is first established, and the people are still unfamiliar with its machinery; when the mutual courtesy and forbearance which result from organized parties have only begun to exist; and when great fundamental questions which move vehemently the passions of men are still in course of settlement. It will be observed that the duration of Government has gradually increased in the colonies, as it gradually increased in England; and I submit that, unless men start with the idea that colonies are bound to be in the exact frame of mind and train of circumstances which prevail in England at the moment instead of being in the frame of mind which prevailed in England at something like a corresponding period, there is no just ground for wonder or complaint at the duration of Australian ministries.

It is a curious fact that if the colonies desired to retort the charge of political instability upon England they could make a much more effective case than she can. In 1838 a select committee of the House of Commons reported that one main cause of the misunderstanding between Canada and the home government was the constant fluctuation of men and opinions in the Colonial Office. There were eight new secretaries of state for the colonies appointed in little over ten years, each with a new policy, more or less differing from that of his predecessor. But so little change for the better did this parliamentary remonstrance produce, that a dozen years ago, when the Australian colonies were negotiating the bases of their new constitutions, they had actually to deal with five separate Ministers holding the seals of the Colonial Office within three years.

Our critics propose to furnish us with a more stable executive in the colonies, nominated no doubt by the mysterious official whom the late Charles Buller named Mr. Mother-country. I wonder whether it is entirely forgotten how that system worked, when men of intellect seriously speculate upon the possibility of imposing it anew upon a million of people, owning a territory as large as Europe, and who have tasted self-government.

The stable executive of old, existing before responsible government was conceded to the colonies, was often recruited from persons of reputation too damaged for promotion in England; and it followed as a natural consequence that they not unfrequently plundered the State by defalcation or by monopolising the public lands. At best they were persons having no necessary sympathy with the community whose interests were entrusted to them, and they were sometimes wantonly and viciously opposed to them. They were so incompetent that, as Mr. Chapman, now a judge in New Zealand, informs us, it was sometimes necessary, even in the torpid and submissive councils, nominated in a large part by the governor, to appoint a spokesman to interpret the policy of the stable executive, which did not contain a single man capable of defending his own measures in debate. But, without going back to the dark ages of colonial misgovernment, is it forgotten what sort of a stable executive was exported to the colonies as recently as the short

* March 16th, 1770.

† Prior's "Life of Burke," p. 155.

interval between the Australian states framing their constitutions and the Imperial Parliament confirming them; not quite a dozen years ago? In the *Times* of August 4th, 1864, one may read these weighty words:—"The neighbouring colonies of Victoria and South Australia will learn that a judge has been appointed to the Supreme Court of the former who had never sat on a seat of justice, and who had compromised himself by corrupt promises to electors; while very soon after a governor has been appointed to the latter colony, in his twenty-ninth year, utterly new to office, and rather too well-known for his dealings on the turf and the Stock Exchange. * * * The colonies must be flattered, both by the general repugnance to their society shown by Englishmen who have anything else to look to, and by the sort of men that we think good enough for their highest offices. They will naturally begin to consider whether the colonies cannot do for themselves as well as we can do for them." The colonies have begun to consider, and ended considering this point, I apprehend. Colonists are rather given to exaggerate their political differences, and to make the most of the sins and shortcomings of their political adversaries, and are answerable, I have no doubt, for much of the misapprehension which exists in England respecting our adopted home; but it has never been my fortune to meet with a colonist who had the smallest desire to replace his free government by the sort of thing which constitutes a stable executive.

It will be admitted, I trust, that there is not quite so clear a case against Australia upon this head as had been commonly supposed. Other ideas which have gathered round this central one are just as idle and exaggerated. "All this perpetual agitation in Australia," an eminent man said to me lately, "is about absolutely nothing that anyone can comprehend." Not quite about nothing. The smallest of the colonies, for example, is a country as large as England and Wales, more fertile and under a far more genial sky, where the public lands have only in a small degree become private property. There were till recently forty millions of acres to dispose of, and the question which most habitually divided parties was the principle upon which they ought to be distributed by the state—in large estates, as in England, or in numerous small estates, as upon the Continent. I do not know what country in Europe had a larger question than this to deal with. Again I have been asked—Have not the legislatures fallen into the hands of inferior men, and the best men been excluded? Speaking of the entire period over which parliamentary government has existed, I believe that the men most unequivocally competent for the management of public affairs have habitually been in parliament.

It must be remembered that in a new country men of ability have various other works to do as important as the work of legislation. The discovery and development of the wonderful resources of the country; rendering easier the extraction of gold; improving the quality of stock; the planting new industries, and enriching the land with plants and animals which nature has denied to it, are works as urgent as perfecting the laws and institutions. Good men, it is true, are sometimes excluded for a time by a gust of popular passion; just as some of the most eminent men in England lost their seats for opposing Lord Palmerston. A few years ago in New South Wales several able men were excluded on a popular question at a general election; but these identical men constitute the leading members of the present government of that colony. In Victoria at the close of last year several able men were excluded on a question which moved the passions of the people, but they will no doubt re-appear in the same way as happened in New South Wales and in England.

Again, it is said the parliament and people of Australia commit mistakes and run after delusions. Let us say they do; what people of whom we have any knowledge are free from the same charge? Eleven years

ago, when I was leaving for Australia, the whole people of England seemed to be in a frenzy of enthusiasm in favour of war on behalf of the Grand Turk. How many of them retain their enthusiasm on that subject at present? In truth the people of Australia are no worse in this respect than any other people; and the mistake consists in setting up an ideal standard of wisdom and moderation for them to which no community can reach. I am far from desiring to prefer any exaggerated or extravagant claims on the part of the colonies. Blame them where they are open to blame, by all means; but be sure of your facts. Blame them where blame is reasonable; but it is not reasonable if the ground of complaint substantially is that Australia is not England. No sensible man will expect absolute identity of views or of practice between the young communities and the old community; he will remember that the colonies are not mere branches of the imperial tree, but saplings from the same root, flourishing in a soil and under conditions of their own which render some modifications of structure inevitable. He will keep in view the fact that he is dealing with states in the second decade of their existence, which had to be organised out of the social chaos created by the sudden association of large masses of men with no previous knowledge of each other, and hardly any common interest beyond the preservation of order. They are in process of growing, and have grown with singular rapidity, but he will not expect to find in the first stage of their growth the gifts and accomplishments which belong only to maturity. A settled public opinion, the reserve of conscious strength and fixed rules of practice in public transactions, are attained by communities only after struggle and discipline. A colonial parliament—the organ of a young, vigorous people—has pressing work to do, and is at that stage of its progress when impatience of delay is natural and healthy, as implying sincerity and earnestness. The House of Commons, in the time of the Stuarts, was in a somewhat similar stage, and passed through a long apprenticeship marked with not a few paroxysms of passion and fits of torpor before it settled down into the effective instrument it has become. No turbulence which can be truly attributed to Australian parliaments, and nothing which malice or ignorance has invented in respect to them, is more than a pale reflexion of incidents in the parliamentary struggle which commenced with John Pym, and is apparently not quite ended yet. Remember this fact always, that England has no longer any interest in colonies separate from the interests of the colonists; and the interests of the colonists cannot have been grossly neglected where public credit has been maintained, where public order has been preserved without interruption, and has been allied with social and material progress, and with individual liberty as perfect as exists anywhere on the earth. But there is a higher consideration which ought to guide English criticism. The Australian colonists possess, and fortunately know that they possess, one of the freest and most serviceable constitutions in existence; but the more universally they recognise the fact, the better and more stable government will necessarily become; for order rests upon public content as its basis. It follows that any criticism calculated to disturb this content ought to be made only upon sure grounds, and that not only wilful, but even ignorant, disparagement of the institutions upon which it depends, by writers or speakers of authority, amounts to a grave offence. The colonial statesman has difficulties to face from which the English statesman is nearly altogether free. In England the bones and sinews which sustain and move the body politic, and constitute the vital machinery of the State, are covered by flowing robes of ceremony, and custom forbids too close an inspection of the august and mystic organism beneath. In Australia you have only the naked ribs and vertebrae, possessed with a vigorous principle of life indeed, but with scarce a rag of traditional veneration to shelter them from inquisitive eyes. Reverence and custom, agents so powerful in the government of states,

can scarcely be said to come at all in aid of authority which has to depend in a large degree upon its intrinsic strength for acceptance and support. It is not surely the part of an English constitutionalist, whether in parliament or the press, to increase the natural difficulties of government under such circumstances. But he does so by unjust criticism, whether he makes the people discontented with its system of government, or only angry at the mother country for the misrepresentation of it. In truth, the maintenance of friendly relations between England and her great colonies has passed from the care of the Colonial Office to the care of public opinion and its interpreters. There are no longer questions of right to determine, and scarcely any question of mutual interest to regulate from which difficulties can spring; but the ties that remain, those of sympathy and kindred, are always highly sensitive. The chief peril lies, I think, in the offensive superiority which Englishmen who remain in England are sometimes inclined to assume over Englishmen who have left England. The Irish and the Scotch, who are an emigrating people, only share this feeling in a small degree. But the question is not one of feeling and sentiment exclusively, but is becoming one of national interests. England interprets between these new countries and all Europe and America, and she is ushering them into the world with the serious impediment of a blemished character. The colony of Victoria, in which I reside, has never cost the mother country a guinea, has never done or wished her anything but good, has exhibited her sympathy in a practical way on trying occasions, has poured upwards of a hundred millions sterling into the coffers of her trade, and may surely expect not to be wantonly injured; and one of her citizens will not be accounted unreasonable, I trust, if he moves for a rehearing of her case upon grounds so sufficient as that the verdict found against her is contrary to the weight of evidence.

DISCUSSION.

Mr. M. H. MARSH, M.P., being called upon by the Chairman, said that for many years he sat in the legislative council of New South Wales, and had had practical experience there, as well as in Queensland, as to the social and political state of the colonies, having also resided for a considerable time up the country. Last summer he made a rapid trip to Australia, and thus obtained recent knowledge of the condition of that country. He would have liked his hon. friend to have expatiated a little more on the social state of Australia, as there was nothing on which there was generally such great misconception in this country. He might say it was precisely the same as in England. He might perhaps mention that on the occasion of his late visit to Queensland they were pleased to entertain him at a public dinner at which nearly 300 were present, and where there were the same evidences of refinement as would be met with here on a similar occasion. The political system of Australia was a subject of deep interest, and it must be understood that if he said anything against that system, it was not intended as a reflection upon the people themselves. In what he might say he was sure he was borne out by most educated men in Australia, because when he was last there he formed his opinions very much from what he heard from them. He could not speak too highly of the beautiful climate of Australia. It seemed to him to have an influence upon the race. The children were more beautiful than in this country, and the climate itself seemed to give the dispositions of the people a genial turn, for nowhere was there more liberality and charitable feeling than in Australia. With regard to the system of Government, however, he could not speak in such high terms. He spoke chiefly of New South Wales, because he was more familiar with that colony.

They found their finances now in a most hopeless state. They were out-running the constable in their public expenditure, at the rate of from £400,000 to £800,000 a-year, in a community of about 400,000 people, and though they were trying to recoup themselves by additional taxes, he was afraid they would hardly succeed. In Victoria they found they were going backwards in political civilisation, for they were now quarrelling about free trade and protection—a question which had been long since settled in this country. There was also some little bigotry about national education in that colony; and here he might mention that the only colony that had advanced in education more than any country of Europe or America was Queensland, which was not democratic, where there was no universal suffrage, with its concomitant—the ballot. During his late visit he went from New South Wales into Queensland, and when passing the frontier the change was like magic. He saw better houses; the people looking happier, with wonderful prosperity all around; whereas the colony he had just left had but little advanced. Queensland, under its present government, had perhaps progressed more rapidly than any other community. Six years ago its population was 25,000; it was at the present moment, he believed, 100,000, and the wealth and prosperity of the people had increased in a much greater ratio. The other colonies might all be called prosperous, for Englishmen, wherever they went, would be prosperous; but, of late years, they had not progressed so rapidly, and immigration had almost entirely ceased, whereas in Queensland the population was drawn not only from the mother country, Europe, and Germany, but also from the other colonies. A great deal had been said about the security of property in the colonies. He was a stockholder to a large extent in New South Wales, and he must say that his cows and horses were often stolen with impunity, which could not be regarded as a proof of the security of property. Bushrangers till lately domineered all over the country, and these depredations were encouraged—he did not say by the Government—but by the bad system of police, which was brought about by political jobbery. It was very well for his hon. friend to talk of the safety of property in Melbourne, with a population of 90,000, but let him go up the country and see the insecurity of property which this political jobbery had created. By the same means the very fountain of justice had been polluted. For political purposes persons were appointed magistrates who were totally unfit for the office. When Mr. Martin, the present Prime Minister of New South Wales, came into power a short time ago, he struck out the names of 400 magistrates because they were wholly unfit for their duties, in consequence of which he made himself so unpopular that he was turned out the first week he went to Parliament, but his successor dared not reinstate the magistrates whom he had dismissed. He (Mr. Marsh) had been contradicted in another place in his statement that the members of the Victoria Parliament had been bribed, not by official appointments, but with actual money, from £10 to £750—they were bribed with positive money. He had this on authority which he could not doubt—from men of high station in the colony and in this country, and he thoroughly believed it. He assured them he entertained the warmest and most cordial feeling towards that country, in which he had lived for fifteen years—to its lovely scenery and unrivalled climate—the country where his children were born, where he still possessed property, and where his nearest relatives and dearest friends resided, but this did not blind him to the defects in its political system.

Mr. DUFFY begged to be allowed to say one word, lest the discussion should get into a wrong channel. His hon. friend who had just addressed the meeting had applied himself to subjects not contained in the paper. There had been gross imputations cast upon the colonies. He had endeavoured to answer them, and to show that this prejudice was not well founded, but his hon. friend

had shifted to other grounds so purely political that he was afraid to follow him. He (Mr. Duffy) had spoken mainly of the colony of Victoria. If the hon. gentleman found that in New South Wales the finances were not in a good condition, he asked how he connected that with democracy, seeing that nations in Europe which were not democratic were in the same condition? With regard to the corruption of the legislature, if his hon. friend specified any case or gave the names of any authorities, he would endeavour to reply to him.

Mr. WM. HAWES said there were so many persons present much better qualified to speak on this subject than he was, that but for the silence that appeared to be spreading over this large meeting he would not have ventured to address them. They were all much obliged to Mr. Gavan Duffy for the eloquent and able defence he had made of the institutions of Australia, and they were equally obliged to Mr. Marsh for the manner in which he had pointed out some of the weaknesses in the working of those institutions. Undoubtedly it was a great mistake on the part of Englishmen to be fond of finding fault with that colonial system which had arisen from among themselves and out of their own prosperity and wealth. But that was a feeling which seemed to be inherent in them not only as regarded the colonies, but even in respect of enterprises at home. They were too apt to indulge in censure of the governing body in any of these undertakings, apparently for the mere love of fault-finding; but, after all, this only served to test governments and institutions, and in the end both were improved and benefited. He thought the hon. gentleman who had favoured them with the paper had somewhat misconceived the sentiments of many Englishmen on this subject. He believed they all admired the Australian colonies; they looked upon them as great and growing countries, whose institutions would progress, and where eventually there would be as sound and healthy a political system as in this country. At home we had still many institutions to reform and a great deal of political delinquency to eradicate; and our institutions, sound and good as they were, had been improved by the influence of public opinion and by the voice of that criticism which his honourable friend appeared rather to deprecate. Let them criticise the colonies as much as they would, but let it be done in good faith and in the spirit of friendship, and from such criticism nothing but real good could arise.

Captain HART (Chief Secretary for South Australia) said, having arrived in this country by the last mail, this was the first opportunity he had had of addressing a meeting in the mother country, and he was anxious to give an opinion on this subject from a South Australian point of view. Looking at the extent of Australia, there were naturally a great many differences of opinion amongst the inhabitants of the different places, and it had been his experience in his visits to this country to find that people here grouped the whole of these colonies together, and seemed to regard the Australian people as one, instead of being, as in fact they were, several separate communities. His hon. friend Mr. Duffy, whom he knew some years ago in Victoria, was quite aware that on some political matters he differed from him materially, but with a great deal that had fallen from him this evening he entirely agreed. He differed from the hon. gentleman who had opened the discussion. For his own part he believed that with regard to the colony of South Australia, to which he (Captain Hart) belonged, and in which he had spent most of his life, the picture drawn by Mr. Marsh would not apply, inasmuch as they were in favour of free trade in that colony. They imposed no duties beyond those which were necessary for the purposes of revenue. They raised a large revenue, and at this moment, instead of being in a bad financial condition, there was something like a half a million of money lying to the credit of the Government. Mr. Marsh had spoken very strongly in favour of Queensland, but he regretted that that gentle-

man did not visit South Australia, to which the nickname had been given of the "farinaceous village," from the fact of its supplying the neighbouring colonies with that which they could not produce so cheaply—the staff of life. Cereals, to the extent of a million and a-half sterling, were exported from South Australia during the year 1864, and that with a population of only 147,000 persons, men, women, and children. During the same year they exported nearly 80,000 tons of flour. They had always had a revenue in excess of the expenditure, and the public debt at the present moment was only between £700,000 and £800,000, although they had some 60 or 70 miles of railway constructed at a time when labour was very dear. With regard to the political aspect of the country, he agreed with Mr. Marsh that in certain colonies the population was of that roving character that universal suffrage did not work well. It was different in the colony to which he had the honour to belong; and this arose from the fact that two out of every three persons were landowners; while in the other colonies this was not the case. The system of selling allotments of land of eighty acres, at £1 per acre, to all who had the money to buy it, had resulted in a class of yeomanry owning land, and the consequence was that South Australia was a more conservative colony than the others, and universal suffrage and vote by ballot had been successful there. He felt sure it was from the want of this discrimination on the part of statesmen in this country that they were altogether mystified by the various accounts they received as to the different colonies. No doubt Mr. Marsh was correct in saying there was an outcry raised in Victoria for protection, and at present the political state of that colony was not satisfactory; but this was merely a state of transition, and could not be regarded as permanent. He begged to express the warmest sympathy with the colony, with which he was himself connected. He avowed himself a true South Australian. It was the land in which his children were born; he had many dear friends there; and he should go back again to that country, for he felt it was his home.

Sir J. GRAY, M.P., would have been glad to have heard some further observations with reference to the remarks of the hon. gentleman (Mr. Marsh). There were not a few friends of his who were at the present time contemplating emigration to Australia, and he confessed that when he went home and told them of the insecurity of property he had heard of this evening as existing in some of the colonies, he doubted whether they would be inclined to trust themselves or their goods in such a country. He would have liked to have heard whether the experience of other gentlemen on this subject was such as to warrant him in reporting to his friends that, if they had cash or goods, they had better stay at home than go to a place where horses and cows were stolen with impunity. The honourable gentleman appeared to attribute these irregularities to something peculiar in the institutions of the country. Now he had heard of cows and horses and many other things having been stolen in England. Mention had been made of outrages occasionally committed by bushrangers. It was a peculiarly happy circumstance for Australia if only bushrangers perpetrated them, because in this country there were garotte robberies even in the most frequented thoroughfares, and he had never heard that attributed to the evils of the Government or the corruption of the representatives of the people.

Mr. C. GILPIN, M.P. (responding to the call of the meeting), said he had attended rather to listen than to speak, and to his shame he confessed he did not know half as much about Australia as he ought to know; but, although he knew but little about it personally, he had a son in that colony, from whom he monthly received letters conveying information similar to much that he had heard this evening, but very dissimilar in some respects from what had fallen from his hon. friend, Mr. Marsh. He thought they could scarcely over-

estimate the importance of a meeting like this, and he felt personally obliged for the invitation which enabled him to be present on this occasion. He believed his own case was not a singular one—that, in the multiplicity of his other engagements, he had not given as much attention as he ought to that which was of the greatest importance to us as a country, viz., the interests of our colonial possessions, and above all the interests of our Australian colonies. He had listened with deep attention to the very able paper of Mr. Duffy, as also to the remarks that had been made upon it, and he confessed he was not surprised at the earnestness, which met with a half rebuke from the chairman, that prompted Mr. Duffy to get up and explain as to certain charges made by his hon. friend, Mr. Marsh, which were certainly of a most startling character. For himself he would say, in whatever company he was, if he heard it stated that the British Parliament—of which he had the honour to be a member—took, directly or indirectly, money value for their votes, he would warmly contradict it. He did not, therefore, wonder at a gentleman, who had been a member of a colonial parliament, requesting to be furnished with the authority upon which so startling a statement had been made. Nothing he had ever heard from Australia justified him in believing that, to any great extent, such a system prevailed there. If it did it was no more an argument against the constitution of Australia than it would have been against England herself at certain periods of her history, when it was well known that many of her members of Parliament were open to corruption. They should judge of these colonies as they would wish to be judged themselves under similar circumstances, and then he was sure they would all agree that Australia, regarded in that light, would stand as a glorious child of England, of which she might well be proud, and towards which, he hoped, she would always extend the right hand of earnest Christian fellowship.

Mr. J. BRADY, M.P., wished to ask his hon. friend, Mr. Duffy, with reference to the Houses of Assembly, what class of men, generally speaking, were returned as representatives, and also what was the relation between the governing bodies of the colonies and the imperial government at home; and whether he considered there was any unjust interference by the latter with the rights and privileges of the colonial legislatures? If those questions were answered in the way he hoped they would be, it would satisfy many minds in this country who were at the present time under the impression that Parliamentary representatives in these colonies did not belong to a class suitable for such a position.

Mr. DUFFY said he had great pleasure in replying to the questions just put by his hon. friend. In the first place, as to the class of men elected as the representatives in the parliament with which he was most familiar, and generally in the Australian parliaments, he might put it to the meeting whether the two gentlemen who had addressed them, Mr. Marsh and Capt. Hart, who had both been members of colonial legislatures, did not fairly represent the class referred to. He might go further and say he believed there had been only three members of the colonial legislature in the House of Commons here, two of whom Her Majesty had thought fit to select for offices in the government. It was true that in a new colony, where there were great industrial interests, the class of men must necessarily be different from those selected here. Many useful members of the colonial legislature would be very much out of place in the British House of Commons, but were, nevertheless, extremely useful men for the community with which they were connected. As to the relations between the colonial government and the home government, he had always regarded that question in this light—the governments of any colonies preserving their connection with the Crown were, within their own territory, as free to deal with it as the parliament and government of this country were to deal with the affairs of this nation;

and in that respect they owed no allegiance whatever to the government in Downing-street. It would be hard, as it seemed to him, if the policy of a state were made to depend upon the decision of a body where it had no representative, and where it had not a single vote. Of late years the Colonial Office had taken the (as it appeared to him) discreet course of interfering with the colonies as little as possible. Latterly the only cause of complaint was the attempt made to send convicts to Australia. That question was dealt with in a somewhat weak manner by the colonial Parliament, in the shape of entreaties and protests, but he (Mr. Duffy) admired the spirit of one distinguished gentleman in the colony, who said, "If they persist in sending convicts here, I will begin by a large contribution to a fund, which other people will be sure to unite in, to send them back to England again!" And this settled the question. The only power at present exercised by the imperial government with respect to colonial legislation was the power of vetoing bills, and he ventured to say that before long that objectionable system must be abandoned.

The CHAIRMAN, in rising to propose a vote of thanks to Mr. Duffy for his admirable paper, remarked that it always seemed to be a very easy task for any one who had been in a foreign country to give an account of anything he had seen there, but in truth the task was a difficult one, because they could only see such matters through the mind's eye of the individual, and he was afraid that was a badly constructed lens, which was apt to distort that which it saw and give a false colour to it, and hence every one came back from foreign countries giving different versions of everything that had come under his notice. In Australia one could understand that there was great scope for an unlimited variety of views and opinions, because the colonies there had been of the most rapid growth, and they had not yet shaken down into that definite form and purpose which were found in older societies. But they were not the less entitled to respect, and were not to be held up to contempt because they did not present those settled features which characterised older communities. The life of a nation was not to be counted by years, but rather by centuries; and it was to be recollected that it had taken seven or eight centuries for this country to arrive at the condition it so much prided itself upon. It was difficult to form an opinion of the state of society in these colonies, because people were apt to generalise too hastily from imperfect observation; and it must be remembered that they consisted of several separate communities, differing materially from each other. People spoke generally of Australia as a whole, forgetting its extent. A remarkable instance of a mistake of a similar character, with regard to England, had been told him by a friend who had travelled in the backwoods of America. An old settler there—not an emigrant—had been accustomed to see an immense map of the United States, and had also seen a map of the world, with a little dot on the outside of Europe which represented Great Britain. The result of this was that the man came to the conclusion—seeing London marked on one side and Bristol on the other—that Bristol was a suburb of London, and that England itself was one great populous commercial city. This was the illusion created by seeing places at an immense distance. He had no doubt his hon. friend (Mr. Marsh) had been in some parts of Australia where sheep were looked upon as being somewhat in common, but as compared with the whole of Australia this might be only an exceptional case. Therefore, they must not think there was a want of truthfulness in the remarks made, or any real contradiction in the opinions expressed. Every person spoke from what he had himself seen, and from his own point of view, and that was not always in accordance with another point of view even of the same thing. They were greatly indebted to Mr. Duffy for contributing something to the general stock of information on this great and complex question; and he was sure all present would participate

in the feeling that nothing could be more useful to this country, as the parent of our colonial empire, than to have the best information that could be procured as to the state of these important dependencies. But another claim to their thanks existed in the present instance, in the good spirit that prevailed the paper, and the evident desire to promote a good understanding between the colonies and the mother country. If allusion had been made to circumstances which might provoke ill-feeling, it had been done only to correct the false impressions out of which such feelings arose. The whole spirit of the paper was such as to commend it to their admiration, and he was sure the meeting would cordially concur with him in giving Mr. Duffy their thanks for having read it.

The vote of thanks was then passed and acknowledged.

Proceedings of Institutions.

HASTINGS MECHANICS' INSTITUTION.—The report presented to the annual meeting held May 2nd, 1866, speaks of the prosperity of the Institution. The following classes have been in operation during the past session:—Senior French, junior French, and arithmetic. The yearly competitive examinations have just taken place for the prizes offered by the committee. The attendance of the classes has been satisfactory. The committee impress the importance of the examinations connected with the Society of Arts on the members of the Institution. They have reason to congratulate their members on the result of the examinations of last year. The following lectures have been delivered during the winter:—G. Buckland, Esq., musical entertainment; T. Brassey, jun., Esq., "Changes in Naval Warfare;" G. Dawson, Esq., M.A., "Richard Cobden;" Mr. John Banks, V.P., "The Solar System;" Rev. W. Barker, "Sense, Reason, and Faith;" W. D. Lucas-Shadwell, Esq., "Battle Fields of England;" Mr. A. H. Wood, "Coal;" Hon. G. Waldegrave-Leslie, M.P., "Turkey and Greece;" Mr. J. E. Butler, "Pneumatics;" Mr. J. Banks, "Oxygen and Hydrogen;" T. Brassey, jun., Esq., "Naval Warfare;" Elihu Burritt, Esq., "Higher Law and Mission of Commerce;" George Grossmith, Esq., "Sketches of Life and Character from the Modern Humourists;" Rev. J. A. Hatchard, "Reading;" Rev. A. Reed, "William the Silent." Three thousand and fifty-three volumes have been in circulation, and 62 volumes of new books have been added to the library during the past year, at a cost of £16 7s. 4d. During the year 190 have joined and 125 have left. The present number of members is 354, or a gain of 65 during the year. The committee express an opinion that the practice of some members in withdrawing during the summer is unfair to those members who bear the burden of the entire year, as the small sums received from them in the winter would not be sufficient to keep up the lecture course and the other arrangements during the twelve months. The committee refer to their connection, during the past year, with the St. Leonard's Mechanics' Institution, believing that the true interests of both Institutions lie in unity of action. They are also pleased to report that there remained a surplus to divide between the two societies after each of their three co-operative attempts, on the occasion of the regatta fête, the soirée, and the conversazione. It will be a matter for discussion whether they cannot also unite for the purpose of furthering their respective usefulness in the matter of class instruction, &c. The receipts have amounted to £255 12s. 9d.; and there is a balance in hand of £81 2s. 11d.

PARIS UNIVERSAL EXHIBITION, 1867.

Meetings of the intended metropolitan exhibitors in classes 19, 24, 25, 26, and 44 have taken place at the Society's house since the last announcement, and sub-

committees have been appointed for the allotment of space amongst the claimants in each class.

Fears have been expressed in many quarters that the proposed exhibition will not take place at the appointed time; the magnitude of the works connected with the building was one cause of these doubts, and the expected war another. As regards the latter cause, it is to be hoped that the efforts of the neutral powers will succeed in removing it altogether; but even should Germany and Italy go to war, it is said that the French Imperial authorities have decided, on principle, that the Exhibition shall be proceeded with, according to the programme. As regards the other question, the completion of the building, it must be remembered that, the greater part of the structure being of iron, a vast deal of work has to be done before much appearance is made on the ground. The work is, however, progressing rapidly; the whole of the underground work has been completed for some time, the drainage, ventilating passages, and cellars are finished as regards their main construction; those which underlie the building are covered in, and the vaulting of the remainder is now proceeding rapidly, the system adopted being that of vaultings composed of a kind of concrete, on the plan known by the name of *Béton aggloméré*, and which has been employed for the vast underground works of the new caserne now in course of erection near the Palais de Justice, and in many other public buildings. It has already been described in the *Journal*, with the exception of the composition of the concrete itself, which the inventor keeps secret. The iron work is being executed by five large firms, and 70 per cent. of the whole is said to be ready. The erection of the building has been proceeding now for some weeks, and portions of the three great divisions or zones of which it consists are now sufficiently advanced to give a good idea of the whole. The outer zone includes the great machinery court or gallery, as it is called (there being no galleries in the ordinary acceptance of the term), together with the smaller galleries, on each side of which the frameworks serving as buttresses or lateral supports to the great gallery, are almost entirely of wrought iron, all the pillars, and most of the girders and beams being made of plate-iron riveted; of this very striking portion of the building more than fifteen pairs of the huge pillars, each 82 or 83 feet high, are in place, many of the girders and tie beams, and some portions of the iron roofing are also completed, together with the pillars and lattice girders of the two lateral courts with the piazza on the outside towards the garden, so that the profile and curves of this striking feature of the new exhibition building are now clearly designated, and present a remarkably noble appearance. The inner zone of the building, which is to be devoted to the fine arts and to the history of labour, or the retrospective museum, is composed of solid walls of masonry, with an iron and glass roof; a large portion of the stone work is now done, so that the disposition of the picture and other galleries, and the outline of the central garden, are now well marked out. Between these two zones are the intermediate galleries, which consist of iron and glass roofs, supported by cast-iron columns; these are progressing in the same ratio as the rest, so that a portion of each section of the building, in fact, a small quadrant of one of the circular ends, is complete, as far as regards the framing. Every day makes a sensible difference in the appearance of the works, which, considering their magnitude, advance with great rapidity. The grand gallery, which is by far the most important part of the work, is in the hands of three firms, MM. Gouin and Co., Cail and Co., and Joret, and is being proceeded with from three different starting points.

The works in the park or grounds which surround the building, including the portion devoted to horticulture, floriculture, and the exhibition of fresh and salt water fish in immense aquariums; the canals, reservoirs,

and ponds are also advancing steadily. There are eight or nine hundred workmen only engaged at the present moment on the works, but the number is to be increased to five thousand as soon as the frame work is a little more advanced, and the other portions can be commenced with advantage. The Commission is pursuing the work with vigour and determination, and it is therefore but just to say that there is no reason to believe that it will not be completed in good time for the purpose intended.

Notwithstanding the extent of ground to be occupied by the building and its surrounding park, the necessity for more space has been felt, and it is said that the Imperial Commission has taken a large plot of vacant ground, which is to form an annexe to the Exhibition and be devoted to agriculture. It is added, moreover, that a very considerable portion of this new space will be devoted to British exhibitors.

Another new department to be added to the Exhibition is one for pleasure boats of all kinds and the industries connected therewith. A piece of land between the Champ-de-Mars and a port or landing place adjacent, the former of 420 and the latter of 500 square metres in extent, are to be devoted to this purpose; and it is proposed to have regattas and nautical fêtes during the time of the Exhibition. M. G. Benoît Champy is appointed president of the committee of the section. It is said that France possess 4,696 pleasure craft of various kinds, employing 5,776 sailors and amateurs.

Belgium has announced her intention of contributing her share to the retrospective museum, or historic gallery of labour, and a sub-commission has been appointed for that special section of the coming exhibition. The sub-commission consists of four members of the Royal Commission, with the Keeper of the Royal Library, M. de Brou, a member of the Commission of the Royal Museum of Painting and Sculpture, an eminent numismatist, the Keeper of the Royal Museum of Antiquities, Armour, and Artillery, and one of the Council of the Schools of Design. The rich and curious productions of the Flemish art-workmen of the middle ages will no doubt furnish a most interesting collection of ancient art. The same section is to be enriched, it is said, with important contributions from Greece, whose productions form a curious contrast to those of the low countries.

Amongst other objects of interest promised from America are models, or maps in relief on a very large scale, of all the chief towns in the United States.

The Viceroy of Egypt is said to take a deep interest in the Exhibition, and to have taken measures to render the contributions from his dominions as complete as possible. Amongst other things promised are a reproduction of one of the most complete temples of ancient Egypt; an immense map, in relief, of the country; a selection of the most remarkable objects from the museum of Boulag; and a series of figures presenting the various classes of the inhabitants of modern Egypt dressed in their native costumes.

The Patriarch of Jerusalem will, it is said, contribute some interesting illustrations of biblical history; Persia a series of ethnographical costumes and a collection of stones from the famous mines of Topaz; and Turkey, amongst other things, a complete collection of the historic medals struck at the mint of Constantinople.

THE COAL QUESTION.

Messrs. *Travers' Circular* has the following remarks on this subject:—

Recently the question of the coal supply has been forced on the attention of the tax-payers, both by the theoretical arguments of Mr. Mill, and the practical proposals of the Chancellor of the Exchequer in favour of some attempt being made to reduce the national debt. What are the reasons for thinking that the coal supply is, at our present rate of consumption, speedily exhaustible? And,

in the second place, what is the exact nature of the results predicted by the writers who have studied the subject? To begin with, by the diminution of the coal supply is not meant the consumption of all the coal in the island. The argument turns on the probability that, though it may be physically possible to drive coal-mines as deep as 5,000 or 6,000 feet, it will cease to be commercially possible. We are not at all likely to be stopped by what is called "the physical limit of sinking." The alarmists, using the term without any reproach, do not pretend that we are anywhere near our lowest coal stratum, nor that the increasing temperature, as we get lower down and nearer the earth's centre, will eventually prove a fatal obstacle to human workers. "But," in the words of Mr. Jevons, whose book on the coal question is now the text-book for his own side, "the cost of sinking and working deep pits is quite another matter. The growing temperature will enervate, if it does not stop the labourers; much increased ventilation will be a matter of expense and difficulty; the hardening of the coals and rocks will render hewing more costly; creeps and subsidences of the strata will be unavoidable, and will crush a large portion of the coal, or render it inaccessible. . . . In addition to these special difficulties, the whole capital and current expenditure of the mine naturally grows in a higher proportion than the depth. The sinking of the shaft becomes a long and costly matter; both the capital thus sunk has to be redeemed and interest upon it paid. The engine powers for raising water, coals, miners, &c., rapidly increase; and, beyond all, the careful ventilation and management of the mine render a large staff of mechanics, viewfers, and attendants indispensable." That is to say, the deeper the mine, the more subsidiary labour is required; the more costly the general management and superintendence, the more fiery, and therefore the less effective and more dangerous the working. The obvious and inevitable consequence of all this will be a gradual rise in price; and this rise in price, as it is the symptom of a gradual exhaustion, will be the occasion of all the calamitous effects of that exhaustion upon the national welfare. It may asked here whether, up to the present time, the effect of increased depth has been an increased cost of coal. Mr. Jevons maintains that it has. The deep pits are only undertaken in search of the finest household coals; only the high price of the finest coal can remunerate the capitalists for working these mines. These high prices afford "a rough but sure indication" of the effect which depth has upon cost. The price of coal from the deepest pits is the measure of the price that will eventually have to be paid for ordinary coals. "When the general depth of coal workings has increased to 2,000 feet, little or no coal will be sold for less than 10s. per ton, and the choice large coal will have risen to a much higher price." That is to say, in all these industries into which coal enters, all industries connected with iron or with general manufactures, the capitalist will have to work under the disadvantage of a double cost of fuel. "And when with the growth of our trade and the course of time, our mines inevitably reach a depth of 3,000 or 4,000 feet, the increasing cost of fuel will be an incalculable obstacle to our further progress."

But may we not import coal in the same way as we import any other raw material? One has been so long and so thoroughly accustomed to this way of looking at things, that there is nothing to wonder at in the readiness with which people, when frightened about the evils of posterity, have flown to this solace. We import, it is said, tin and lead and copper, after using up our own ore; we import timber, to make up for the deficient supply from our own forests. Why should we not reverse the coal trade in the same way, and after exporting coal to the vast extent we do now, get a future return? Because the very circumstance which enables us to reverse other trades, by the importation of their raw material, is the fact that we possess such an abundance of what is by

far the most important raw material of all—coal. We pay for all this other raw material, we preserve “the reciprocity of trade,” by our coal, and in two ways. We export it in its crude shape to the extent of very nearly nine million tons a year; and, secondly, we pay by manufactures which represent a certain consumption of coal, and which foreigners take from us, because they can get the finished article cheaper from us than if they imported from us the required quantity of coals, and then made the article for themselves. “The coal exported acts as a make-weight, to remedy in some degree the one-sided character of our trade. . . . To import coal as well as other raw materials would be against the essentially reciprocal nature of trade.” This is the general argument. Let us look to particular facts. Suppose that we were dependent on America for coal, and suppose—what is absurd—that the present demand for coal were to continue stationary. “About 1,200 colliers of the size of the *Great Eastern* would be required to maintain our present supplies only.” The united tonnage of this fleet of steam vessels, of whatever size, “would be at least five times the whole of our tonnage now employed in every trade and every part of the world.” London cannot be supplied with coals now at less than 20s. per ton. Could coal from America possibly reach us at this price, or anything like it? “Our industry would then have to contend with fuel, its all-important food, eight or twelve times as dear as it now is in England and America.” The practical conclusion from all this is that our present progressive condition will not continue. Our great supremacy in manufactures will gradually diminish, and eventually change into a distinct inferiority. At present our excess of population emigrates, and having emigrated, demands the products of our manufacturing industry. Take away the coal, on which our superiority in manufacture so materially depends, and this process to which we have been, and now are, so enormously indebted for our commercial greatness, may come to an end. The social revolution which would ensue upon the decay of our manufactures appears to the imagination of such an astounding magnitude and complexity that we may well be excused from even hinting at its probable direction here. The more important question is, what we can do by anticipation to meet or soften a result which may be a-head of us. The first notion that presents itself is to levy a tax on the exportation of coal, or even to prohibit exportation. But, owing to what Mr. Jevons points out as “the peculiar relation of coal to our shipping interest, a tax on exported coal would be paid “through and to the discouragement of our navigation; it would be equivalent to a duty on outward tonnage.” And in this way:—Coal is now carried out as ballast or make-weight, and is subject to the low rate of back carriage. The more we import, there must be an increasing surplus of inward freights, and an increasing demand in proportion for outward ballast freights. The coal thus taken out has to compete with the fuel of the parts to which it is taken. The freight and the price have to be lowered until the competition is successful. Suppose you put on a 4s. coal duty per ton, the ship-owners would receive 4s. less on the freight. The consequence would be a corresponding rise in the inward freight, which the consumer would have to pay in the increased price of the foreign commodity. It may be said that this increase of price would represent the help given by the present generation to the next; we are willing to pay more for our imports in order that we may have more coals. True, but we are helping them in the most expensive way, because we are doing something to discourage the shipping interest, and that carrying trade on which, it may be, our future prosperity may mainly rest. Compare with this the assistance we should be giving by reducing the national debt. “An annual appropriation towards the reduction of the debt,” as Mr. Jevons says, “would serve the three purposes of adding to the productive capital of the

country, of slightly checking our present too rapid progress, and of lessening the future difficulties of the country.” It may be noticed that this does not in any way affect the 11th clause of the French Treaty, by which we undertook to let France have our coals duty free for ten years. Nor does it in any way discountenance all these minor provisions for checking the wasteful consumption of coal at the pit’s mouth, or by the non-economisation of smoke, cinders, and so on. The entire subject is full of interest, and has been happily brought under notice at a time when the Chancellor has undertaken the gigantic task of paying our debts, a by no means popular undertaking. It is to be hoped that with the knowledge of our utter incapacity for estimating the changes that are likely to befall us even in the present time, the fears that appear simultaneously to have presented themselves to so many minds, as to the commercial condition of our great grandchildren, may be proved to have been somewhat exaggerated. It is a part, however, of our national character, in which self-confidence forms so excellent an ingredient, that we can undertake the management of affairs two centuries hence, and console ourselves by an apparent sacrifice to principle. At least we cannot go far wrong in paying so moderate an instalment of the heavy debt that encumbers us.

THE COPPER TRADE.

The following remarks on the position and prospects of the copper trade in England are by Messrs. Vivian and Younger:—

The total production of fine copper in the world is, on good authority, estimated to be at present 90,000 tons per annum, of which more than 48,000 tons are exported from Chili, as is shown by the following table of exports from thence during the past twelve years, viz.:—

	Tons.
1854	15,797
1855	20,250
1856	21,938
1857	25,498
1858	30,470
1859	28,250
1860	36,289
1861	38,371
1862	43,109
1863	32,540
1864	47,500
1865	48,372

The production in the United Kingdom reached its maximum in the year 1856, since when a large falling off has occurred, the yield at present being only about half of what it was in that year. The Government tables for 1865 have not yet been published; but, as we know that the mines of Devonshire and Cornwall (which form three-fourths of the total production of the British Isles) yielded last year 9,750 tons of fine copper, against 10,050 tons in 1864, we are able pretty accurately to estimate the total production of the United Kingdom for 1865, and we put it down as equal to 1864, say 13,000 tons. The figures for the last twelve years will then stand as follows:—

	Tons.
1854	19,899
1855	21,294
1856	24,257
1857	17,375
1858	14,456
1859	15,770
1860	15,968
1861	15,331
1862	14,843
1863	14,247
1864	13,302
1865	13,000

The yield of the Cornish and Devon mines for the first quarter of 1866 is put down, according to the *Mining Journal*, as 2,220 tons, against 2,498 tons during the same period of 1865, which goes to confirm the steady decline in production as exhibited in the foregoing table.

The other European production, though in the aggregate of considerable importance, seems, as far as we can ascertain, to remain about stationary, and may, therefore, be considered to occupy a neutral position with reference to the broad question of supply and demand.

The yield from Australia (which is directed exclusively to England and India) has lately averaged about 5,000 to 6,000 tons of fine copper, and the richest mine there (Burra Burra) has become poor, so that altogether the above rate of supply is with difficulty maintained, the tendency being rather towards a decrease in production. The yield at the Cape of Good Hope, though progressive, is at present much too small to have any bearing on the price of copper.

Taking the world's production, as previously stated, at 90,000 tons per annum, Great Britain works up about two-thirds of the whole, viz., 60,000 tons, of which she exports about 37,000 tons, retaining the remainder for home consumption; the quantity for these two requirements, taken together, having doubled itself during the last ten years. The annual increase of consumption of copper in the world is estimated as 8,000 tons, and there is no reason to believe that it will not continue at the same rate.

The principal country to which copper is exported from the United Kingdom is India, and the following table will show the falling off which has taken place during 1865.

EXPORTS OF COPPER AND YELLOW METAL TO BOMBAY, CALCUTTA, AND MADRAS.

	Tons.
1863	14,226
1864	15,764
1865	9,453
First quarter of 1864	2,328
" 1865	3,663
" 1866	1,304

The falling off in export of coal from England to Chili will be shown by the following table:—

	Tons.
Dec. 1865 and Jan. 1866	11,000
Feb. 1866	4,000
March 1866	3,250

Four months 18,250

	Tons.
Dec. 1864 and Jan. 1865	17,000
Feb. 1865	8,500
March 1865	7,200

Four months 32,700

exhibiting a decrease of 14,450 tons during four months, or at the rate of 43,000 tons per annum.

ON THE POISONOUS CHARACTER OF NITROGLYCERINE.

In the "*Hanoverian Journal for Practical Surgery and Medicine*" (*Zeitschrift für praktische Heilkunde und Medicinalwesen*, Hannover, 1866, Heft. I.) there is an article by Mr. B. Schuchardt on the injurious effects of nitroglycerine upon men and animals. Among the higher animals he found that it acted chiefly on the brain, and in large doses caused death. In order to study its effect upon himself, the author took one drop at 10 a.m.; five minutes after great giddiness came on, accompanied by weakness of sight, headache with throbbing in the temples, weariness, sleepiness, strong aromatic taste in the mouth, a burning feeling in the

throat, and pain in the region of the heart. An hour later, whilst incautiously endeavouring to take some nitroglycerine out of a bottle by means of a tube, he received a considerable quantity in the throat. Although he spat it out at once, and rinsed out his mouth with alcohol, he felt the above-described symptoms return, so that he was obliged to go to bed. He then fell into a half-senseless condition, which lasted some hours, and left behind a violent throbbing headache, with sensitiveness to light, giddiness, and trembling in the whole body. At first a feeling of warmth spread over the whole system, and the pulse increased in speed, later a feeling of cold came over him; besides this, there was a burning sensation in the region of the heart, and nausea, but no vomiting. On the following day every symptom of poisoning had disappeared. There was no sign at all of convulsions.

When applied externally, nitroglycerine produces no effect at all; to have any action it must be absorbed into the blood. This seems to show that its poisonous effects are due to the products of its own decomposition. Perhaps protoxide of nitrogen is set free in the blood. As the blasting oil has the property of penetrating through organic tissues in a very marked manner, it is easy to understand that workmen handling the material should get headaches by absorption of it through the skin. As nitroglycerine is not volatile, no action through the lungs can take place.

As the excellence of nitroglycerine as a blasting material is sufficiently proved, it will not be long before it finds a wide application. Then will come the question whether its poisonous properties are not so considerable as to forbid its employment. The author of the article referred to believes, from his researches, that this is not the case. Experiments on animals have shown that, to cause death, comparatively large doses are necessary. It is true that upon man small quantities produce decided symptoms of poisoning, but, even after a somewhat large dose, these were not of such an alarming character as to cause any apprehension of a fatal termination. The author got about a hundred drops in the mouth and swallowed at least ten. Violent symptoms of poisoning came on, but not such as to cause anxiety about his life. In the arts and manufactures far more dangerous poisons are employed, such as phosphorus, cyanide of potassium, and corrosive sublimate. However, in consideration of the injuriousness of nitroglycerine, some precautionary regulations for its manufacture and sale should (in the author's opinion) be adopted. Besides this, workmen should be taught the dangerous nature of the blasting oil, in order to prevent their injuring themselves by carelessness in handling it. If these means were taken, it is thought that nitroglycerine would scarcely be found more injurious than any of the other poisons used in the arts and manufactures.*

Fine Arts.

FINE ART ESTABLISHMENTS IN BELGIUM.—The kingdom of Belgium is one of the busiest in the world, not only with respect to material, but also to artistic industry and the fine arts. Considering the extent of the resources of the country, the amount devoted to the encouragement of art is extremely magnificent. The budget for the year 1867 is in excess of that of the current year by about four thousand pounds. The fund for the assistance of young artists showing proof of talent is increased from 10,000 to 15,000 francs; that for the encouragement of line and

*The *Borggeist* has lately noticed several cases of the spontaneous decomposition of nitroglycerine, accompanied by more or less violent explosions. According to Nobel, this can only happen with nitroglycerine which has not been fully purified.

medal engraving, from 20,000 to 30,000 francs; the vote for the execution or purchase of works of art is raised from 60,000 to 100,000 francs; a further sum of 25,000 francs is devoted to the acquisition of works of Belgian artists only; the sum of 15,000 francs for the purchase of contemporary works for the completion of the museum of modern art at Brussels; the vote for the encouragement of schools of design is increased from 75,000 to 100,000 francs; 2,000 francs are voted towards the establishment of an atelier for restorers of pictures in the Academy of Antwerp; and 4,000 francs for the publication of an illustrated edition of the catalogue of the museum of antiquities. A private society has just established at Louvain and Malines workshops for the re-production of objects of religious art.

Manufactures.

IRON OXIDE PAINT.—Mr. Calley, of Torbay, has invented a paint for iron structures, in the composition of which it appears that oxide of iron instead of lead is employed. Mr. William Humber, speaking of this paint, says:—"Notwithstanding the great importance of preserving iron structures from decay, it is sufficiently evident that chemists have not kept pace with the times; in all directions the use of iron has increased in an almost incredible degree; and yet some of our noblest structures have almost been condemned to decay for the mere want of attention to the composition of paints or coatings capable of protecting iron from oxidation; thus, for instance, it is well known that no less than twenty tons of rust have been collected from the Britannia-bridge, and, in all probability, an equal amount has accumulated or fallen away unnoticed and unweighed. If lead paints are applied to iron, it will be observed that the iron will usually oxidize underneath the lead coating, and gradually detach it, so that it will scale off, not through its own deterioration, as it will be found to be as good as when first applied, but simply by the mechanical action of the ferruginous oxide upon it." This, however, is stated not to be the case with the iron oxide paint, "for," says Mr. Humber, "not only is the iron coated with this paint preserved, instead of being deteriorated, but the paint is in itself cheaper than lead paint, as, from the facility and tenacity with which it adheres, a larger surface is covered by a given quantity of this composition than an equal amount of lead would suffice for." The paint is said to have been used with success in the Government dockyards and elsewhere.

FASTENING DRIVING TYRES WITHOUT HEATING.—Mr. Griggs, of the Boston and Providence Railway, has a method of putting on driving tyres without the use of heat, that seems to be very simple and very economical. The *American Railway Times* says the wheels are of cast iron, cast with dovetailed recesses on the outer rim, and the tyre is turned out so as to slip easily over the whole. After the wheels are fastened on the axle, the tyre is let down over the wheel, and a quantity of wooden blocks about 3in. wide, 1½in. thick, and a little longer than the width of the tyre, are placed in the recesses between the wheel and tyre, and driven down carefully by a sledge hammer until the requisite strain is attained. These wooden blocks are made of thoroughly seasoned walnut or elm. When once driven home they are said to hold the tyre so firmly in place, that there is no necessity for otherwise securing it, though there is no objection to other fastening if it is desired. The time occupied in putting on one of these tyres is about twenty minutes, and only three men are required to do the entire work. All tyres on the Boston and Providence road have thus been fastened for the year past. Either steel or iron tyres can be thus treated, and Mr. Griggs has both kinds running, which were put on in the same way.

Commerce.

COFFEE AT PENANG.—The *Penang Gazette* says that the attempt to grow coffee in that district has not been so successful as was originally anticipated. "During the last four or five years coffee planting has had a pretty fair trial in Penang, but the conclusion arrived at is that coffee culture will not pay there, in fact that it is nearly a complete failure. The plants, during the first twelve or eighteen months, grow well and are strong enough, but as soon as they commence bearing, and when the long droughts set in (which by the way we have had for the last three years), the plants become scraggy, lose their leaves—partly through drought and partly through the ravages of insects—and eventually die. In a rich soil, and under a shade, the plants stand better, and do not appear to suffer much from insects, but the crop is inferior in quantity, and except near dwelling houses, the cultivator has a small chance of reaping any harvest whatever. These remarks apply especially to the plain; the plants on the Great Hill still bear, but their extension seems bounded to the present localities round the bungalows."

COTTON TRADE IN SPAIN.—The chief manufacturing interest, says Mr. Sackville West, in his *Commercial Report* for 1865, consists in the cotton manufactures of Catalonia, a local interest which has hitherto succeeded in resisting all attempts on the part of the Government to modify the existing rates of duty. This industry employed about 100,000 people in 1861, and there were 1,000,000 spinning machines in work. During the five years ended 1860, Barcelona imported cotton as follows:—

	United States.	Brazil.	Venezuela.	Porto Rico.
	Bales.	Bales.	Bales.	Bales.
1856	124,968	21,092	1,305	1,169
1857	72,376	9,913	..	28
1858	92,578	10,620	916	676
1859	108,166	3,711	148	15
1860	110,283	4,547	344	..

The importation in 1863 fell off to 105,920 bales, and the subsequent depression of the trade was most severely felt in this province, although the mills were kept open by supplies, from Marseilles and Cette, of Levantine and Egyptian cotton. The British trade with Barcelona, which may be considered the commercial capital of Spain, has gradually fallen off, and, with the exception of coal and machinery, the imports are small. The great trade consists in smuggled French goods, which are introduced under Spanish marks, and such is the influence of those concerned in this trade, and such the fear which these provinces inspire by their revolutionary tendencies, that, as I have before remarked, all efforts to modify the existing, almost prohibitory, tariff have proved of no avail. If this system could be abolished, both the interest of the smuggler and he who supplies the smuggled goods would cease, and a fair market be opened. The whole country is affected by a system based upon fraud and venality. Its demoralizing effects are everywhere apparent, and the financial condition of the government is seriously compromised by it. These facts are recognised by all intelligent Spaniards, who, however, assert the inability of any government, under existing circumstances, satisfactorily to deal with them. The political organisation of parties is such that any serious consideration of the subject of commercial reform would not only create alarm, but produce divisions which would render it impossible to carry on the government under such circumstances; all that can be looked for is a gradual relaxation of the system, and perhaps an appreciation of the advantages arising therefrom, which sooner or later will awaken the nation to their true interests.

LIVERPOOL COAL TRADE.—Messrs. Higginson and Co.'s *Export Coal Circular* gives a statement of the export coal trade of the port of Liverpool during the past eleven years, showing also the increase of the coal trade at Birkenhead by rail during the same period, and the quantity exported from there, separate from that shipped on the Liverpool side of the river. The quantities during the years 1860 to 1863 are estimated as regards Birkenhead, but are believed to be nearly correct; for 1864 and 1865 the accounts have been kept separate. There have been exceptional causes at work during the past year to cause the exports from the Mersey to fall off, as compared with 1864, a large quantity of tonnage usually loading at this port being locked up in Eastern ports for want of cargoes to bring them home. This has therefore taken much of the business that would have been done at Birkenhead to the East Coast and Severn ports. There has also been a great falling off in the quantity of South Wales coal exported from Birkenhead in 1865 as compared with 1864; the decrease being somewhere about 30,000 tons, the requirements for blockade running steamers at Nassau, Bermuda, and elsewhere having ceased early in 1865.

Year.	Tons of coal brought to Birkenhead by rail.	Tons of coal exported from Birkenhead.	Tons of coal exported from Mersey, exclusive of Birkenhead.	Total foreign exports from the port.
				Tons.
1855	178,368	..	..	406,561
1856	211,815	..	..	415,036
1857	276,352	..	..	499,173
1858	253,061	..	..	467,478
1859	309,683	..	..	564,947
1860	236,667	144,000	450,040	594,040
1861	291,015	190,000	434,549	624,549
1862	356,802	230,000	379,748	609,748
1863	428,478	248,956	337,777	586,733
1864	525,665	313,398	433,444	746,842
1865	486,505	227,348	389,628	616,976

Colonies.

TELEGRAPHS IN NEW SOUTH WALES.—The only line of telegraph in course of construction in the arrival of the last advices was that between Deniliquin and the South Australian boundary, which, when completed, will place the capitals of the two colonies in direct communication. That portion of the line between Deniliquin and Moulamein, being a distance of 65 miles, has been completed. The station will be in the centre of a pastoral district. When the line shall have been completed and opened to Balranald, a further distance of 45 miles, a still more important portion of the district will be opened to telegraphic communication. The work was being pushed on, and will, it is anticipated, be completed within the contract time. The people of Burrowa being desirous to avail themselves of telegraphic communication, have made application to Government to construct a branch line from Yaas to Burrowa, a distance of 35 miles. It is understood that the application has been complied with. Similar applications for opening stations at various places through which the line passes have also been made.

NEW ZEALAND TOBACCO.—A most luxuriant crop of tobacco is said to have been recently growing upon some land at Epsom, in this colony, and is stated to be equal in appearance to the best grown crops in America. Unfortunately, however, there appears to be no one in the colony who understands the treatment of the leaf, or its manufacture into good merchantable tobacco.

MELBOURNE BOTANIC GARDENS.—The building for the new laboratory at the Botanic Gardens has been fur-

nished and fitted up with the necessary apparatus, and a series of experiments commenced under the direction of Mr. Muller, for the extraction of tar acids, potash, &c., from the various woods of the colony, with a view to preparing a tabular statement of their respective products, and also that specimens may be in readiness for the forthcoming exhibition. It is also intended to test various natural products of the colony, as to their suitability for paper material, and to prepare various raw materials in a fit state for export. It may be mentioned that the essential oils prepared from the leaves of the eucalypti, &c., in a similar series of experiments undertaken prior to the last exhibition have now become articles of commerce.

PLEURO-PNEUMONIA, TASMANIA.—A proclamation appears in the *Tasmanian Gazette* prohibiting the importation of all cattle in Tasmania, subject nevertheless to the following conditions:—Cattle may be imported if landed at either Hobart-town, Launceston, or Port Arthur, on the condition of undergoing an inspection by an officer appointed by the Governor prior to their being landed. Any cattle that on inspection may appear to be infected with the disease pleuro-pneumonia to be immediately killed and disposed of as the inspecting officer may direct. Imported cattle, once placed in the slaughter yards, are not to be removed therefrom until slaughtered. Cattle imported from the United Kingdom may, on undergoing a satisfactory inspection by such officer as aforesaid, be landed at any of the above places. None of the above conditions are, however, in any way to affect the landing of cattle in the islands situate in Bass's Straits.

PROGRESS OF MELBOURNE.—The value of the imports and exports at the port of Melbourne, up to the 17th of February of the present year, as compared with the corresponding portion of the previous year, is as follows:—Imports, 1865—£1,753,714; exports, £1,605,920. Imports, 1866—£188,156; exports, £1,649,624. There is therefore an increase in the value of the imports of £130,442, but a decrease in the value of the exports of £46,296. The value of property in Melbourne has lately much increased; a private residence and grounds within a few miles of Melbourne, which a few months ago were purchased for £3,200, have just been resold for £4,500. An hotel in Elizabeth-street was lately offered at £4,000, and £5,500 has recently been refused. At the present time three of the best private residences ever erected in Victoria are in process of building in one of the suburbs, their cost being estimated at about £12,000 each.

Notes.

PARIS TELEGRAPHIC SERVICE.—The system of urban telegraphs in Paris is being gradually carried towards perfection, and the rapid increase in the use of the wires by the public, shows how much these improvements are appreciated. In the first place messages can now be sent from one station to another without passing through the central office as heretofore; under the present arrangement the average time for the delivery of a message by the telegraph is reduced to twenty minutes; the word Paris has been suppressed from the direction; and lastly, the messengers who deliver the telegrams are authorised to receive the messages in reply and to collect the charges, so that a person receiving a telegram may answer it on the instant without quitting his house.

POST-OFFICE SAVINGS BANKS.—The annual return of the Post-office Savings Banks has been issued. The amount due for principal and interest to depositors, which was £4,993,123 at the close of the year 1864, had risen to £6,526,400 at the close of 1865—an increase in the year 1865 of no less than £1,533,277, or above thirty per cent. The amount of business done in the year was

very great; as much as £3,719,017 was received, and £2,318,610 paid out. The charges and expenses for the year amounted to £49,526. At the end of the year the sum standing to the credit of the Post-office Savings Bank fund at the National Debt Office, with the balance in the hands of the Postmaster-General, amounted to £6,586,657, to meet the liability of £6,526,400.

A WORM PROTECTOR, designed to capture and kill the worms which annually infest the trees of forests and parks and fruit trees, has been invented by F. R. House, of Connecticut. It consists of a tin screen, of bell shape, which is to be soldered around the tree and suspended on an india-rubber band that fits the bark closely; under the expanded edge of the screen, and concealed, there is a receptacle for oil; the worms in their ascent cannot pass the "protector," but are likely to fall into the oil. This invention has been tested, it is said, with the best results.

THE POST OFFICE AND THE TELEGRAPH.—The time appears to be approaching (says Messrs. Travers) when the Post-office should take the telegraphic system of the country into its hands. The great benefit of communication by telegraph is almost neutralised by the heavy charge made by the companies, and by the fact of the offices being only open for a limited time. It is not extravagant to say, that were the telegraphs of the country organised on a uniform system, messages of fifteen words could be profitably sent to any part of the kingdom for 6d. Switzerland is a poor and thinly-peopled country, yet messages of (we believe) twenty words can be sent, within any part of her boundaries, for 1 franc, or 9½d.; and the operation is a profitable one to the Government. When will rich and densely-peopled England be able to say the same?

ERUPTION PRODUCED BY AN ARTESIAN WELL.—A correspondent at Venice of the *Independence Belge* states that an artesian well was being dug in a garden, near the Church of St. Agnes at Venice, and had reached to a depth of fifty metres, when, in the afternoon of the 11th of April last, when the workmen had left off work, a subterranean rumbling was heard, and a jet of water, the diameter of the opening, and the height of a house, was thrown from the mouth of the well. After some time the noise increased, and solid smoking masses were thrown up with the water, falling upon the houses near. It is even stated that the violence of the eruption was so great that a considerable crack was made in the wall of the church, and the inhabitants of many of the neighbouring houses were compelled to leave them. After a time a large number of workmen were brought to the spot, and openings were made to allow the water to escape; this, according to the correspondent who sends the account, prevented any further mischief. The eruption appears to have continued till half-past eleven at night.

Correspondence.

GRANITE WORKING.—SIR,—In my remarks on Mr. Muir's paper, reported in the last *Journal* (p. 473), what I intended to convey was that—"It had been found that the small ornamental polished columns of Salisbury Cathedral had been subject to scaling, which was attributed, by a writer of the last century, to the high degree to which they were polished, but this opinion was opposed by more recent writers on the subject." Referring since to a "Hand-book of Salisbury Cathedral," published by Blake, 1856, at page 9 I find the following:—"The pillars and shafts, both for use and ornament, are of Purbeck marble, but with this difference—the pillars which bear the weight lie in their natural form as found in the quarry; the shafts for ornament have their form inverted, which would make them subject to split or cleave asunder were they to support any weight at all."—I am, &c., W. BOTLEY.

Salisbury-villa, Upper Norwood.

MEETINGS FOR THE ENSUING WEEK.

- MON.....Entomological, 7.
British Architects, 8.
Asiatic, 3. Annual Meeting.
Odontological, 8.
Royal Inst., 2. General Monthly Meeting.
R. United Service Inst., 8½. Captain A. Moncreiff, "Moncreiff's method of mounting Guns with counter weights, of using them in gun-pits, and of laying them with reflecting sights."
TUES. ...Anthropological, 8.
Geologists' Assoc., 8.
Royal Inst., 3. Prof. Ansted, "On the Application of Physical Geography and Geology to the Fine Arts."
WED. ...C Geological, 8. 1. Prof. R. Harkness, "On the Metamorphic and Fossiliferous Rocks of County Galway." 2. Mr. J. Geikie, "On the Metamorphic lower Silurian Rocks of Carrick, Ayrshire." Communicated by Prof. A. C. Ramsay. 3. Prof. W. C. Williamson, "On a Cheirotherian Footprint from the base of the Keuper." Communicated by the Assistant-Secretary. 4. Mr. J. W. Pike, "On some remarkable Heaves or Throws in Penhall Mine." Communicated by Dr. C. Le Neve Foster.
R. Society of Literature, 8½.
THUR. ...Antiquaries, 8½.
Chemical, 8. Mr. A. Vernon Harcourt, "On the course of Chemical Action."
Linnean, 8. 1. Mr. John Miers, "On *Myostoma*, a new genus of *Burmanniaceae*." 2. Dr. George Sigerson, "On Cortical Cuneate Rays, and their origin." 3. Dr. W. L. Lindsay, "On New Zealand Lichens." 4. Major S. R. T. Owen, "On the Surface-Fauna of mid-ocean in *Foraminifera*."
Royal Society Club, 6.
Royal Inst., 3. Prof. Huxley, "On Ethnology."
FRI.Astronomical, 8.
Royal Inst., 8. Prof. Frankland, "On the Source of Muscular Power."
SAT.R. Botanic, 3½.
Royal Inst., 3. Prof. Huxley, "On Ethnology."

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

- Par.
Numb.
159. Bill—Belfast Constabulary.
137. Works and Public Buildings—Abstract Accounts.
222. Customs—Minute.
225. Coals, Cinders, and Culm, &c.—Account.
250. Parliamentary Representation (Ireland)—Returns.
Church Estates Commission—Fifteenth Report and Appendix.
Delivered on 17th May, 1866.
147. Bill—Sea Coast Fisheries (Ireland).
47. Navy (Crime and Punishment)—Report.
201. Maidstone Election Petition (corrected pages).
244. Deviation of Compasses—Return.
247. Bridgwater Election—Minutes of Evidence.
265. Railway Reform (Ireland)—Memorial.
SESSION 1865.
442. (c). Poor Rates and Pauperism—Return (C.) (In-Maintenance and Out-Door Relief).
Delivered on 18th May, 1866.
246. Post-office Savings Banks—Account.
248. Prisoners (House of Correction, Tothill-fields, &c.)—Returns.
262. Chinese Pirates—Return.
263. Portpatrick Harbour—Correspondence.
268. Population, Revenue, &c.—Returns.
270. London (City) Corporation Gas, &c., Bills—Report from Select Committee.
SESSION 1865.
442. (A. XI.) Poor Rates and Pauperism—Return (A) (March, 1865 and 1866).
Delivered on 19th May, 1866.
161. Bills—Elections (Returning Officers).
164. " Nuisances Removal.
64. (1.) Sheriff Courts (Scotland)—Returns.
249. Fisheries (Ireland) Act—Return.
256. Grand Jury (Ireland) Act—Return.
258. Tea, Coffee, &c.—Return.
Delivered on 22nd May, 1866.
160. Election Expenses—Returns (Part I. Counties, England and Wales).
283. Terminable Annuities—Statement.
Delivered on 23rd May, 1866.
151. Bills—Railway Companies Securities.
160. " Colonial Bishops.
162. " Reformatory Schools.
163. " Industrial Schools.
63. (vi.) Committee of Selection—Seventh Report.
69. (iii.) Railway and Canal Bills—Fourth Report.
238. Poor Removal (Ireland)—Correspondence.

271. Probate Duty, &c.—Return.

Cattle Plague—Third Report of Commissioners and Appendix.

Delivered on 24th May, 1866.

160. (i.) Election Expenses—Return (Part II., Cities and Boroughs).
 251. East India (Military Finance, &c.)—Return.
 254. Exchequer—Account.
 255. Hereford City Election—Minutes of Evidence, &c.
 267. Navy (Ship *Trusty*)—Return.
 277. Boroughs (England and Wales)—Return.
 281. Union of Benefices (London)—Draft of Scheme.
 282. Cattle Diseases (Ireland) Act—Orders in Council.

Delivered on 25th May, 1866.

253. Cunard Mail Steamers—Return.
 264. Mercantile Marine Fund—Account.
 Post-office—Twelfth Report of the Postmaster-General.

Delivered on 26th May, 1866.

160. (ii.) Election Expenses—Return (Part III., Cities and Boroughs) continued.
 284. Freeholders—Return.
 285. Railways—Report.

Delivered on 28th May, 1866.

33. (i.) Customs' Clerks (London)—Treasury Minute.
 266. Customs' Clerks (Out Ports)—Correspondence.
 280. Salmon Fisheries (England and Wales)—Fifth Annual Report.
 Bank of England—Letter from the Governor.

Delivered on 29th May, 1866.

146. Bill—Indian Prize Money.
 151. Civil Services—Statement of Excesses (corrected copy).
 176. Sanitary Works—Return.
 Public General Acts—Caps. 21 to 31.

Patents.

From Commissioners of Patents' Journal, May 25th.

GRANTS OF PROVISIONAL PROTECTION.

Air, exhausting and compressing—1282—G. Davies.
 Ammoniacal and ammoniated soap—130—J. Hooker.
 Animal and vegetable charcoal, calcining, &c.—1242—W. Cormack.
 Animals, destroying vermin on—1274—J. G. Hope.
 Artificial flowers—1244—A. A. Costallat.
 Baling bands, fastenings for—1208—E. J. Beard.
 Bars of metal, cutting—1325—J. Fletcher.
 Bottles, corking—1357—H. Fraser.
 Carding engines, double-cylinder—1343—L. R. Bodmer.
 Carriages—1345—W. Botwood.
 Caustic alkalies, obtaining—922—J. Davis.
 Central fire guns, working the extractors for—1300—W. W. Cross.
 Centrifugal governors—1379—G. Haseltine.
 Clarifying apparatus—1310—W. E. Gedge.
 Coal, distilling—1278—W. Young and P. Brash.
 Cooking ranges—1306—B. Wright.
 Cop tubes—1264—H. and J. Douglas.
 Cricket wickets—1246—W. H. Stanley.
 Crinoline skirts—1168—H. A. Bonneville.
 Cupola and other furnaces—1292—S. Chatwood and J. Sturgeon.
 Engines, valves for—1304—M. H. Atkinson.
 Explosive compounds—1341—J. H. A. Bleckmann.
 Feeding holders—1236—F. F. Benvenuti.
 Fibres, combing—1283—C. E. Brooman.
 Fibres, dressing—1298—D. Chadwick, jun., and G. A. C. Bremme.
 Fibrous materials, preparing—1359—E. Brasier.
 Fibrous materials, washing—577—J. Petrie, jun.
 Fibrous substances, preparing, &c.—1353—W. C. Moore, J. M. Haslam, and J. Robinson.
 Fire-arms, breech-loading—1361—T. Hunt.
 Fire-arms, breech-loading—1367—C. Pryse and R. Redman.
 Fire-places—1395—W. Clark.
 Furnaces—1173—W. Edmond and A. Gurli.
 Furnaces—1210—W. Begg.
 Furnaces—1252—D. Urquhart.
 Gas lamps—1188—J. Wavish.
 Gas, purifying—1233—G. C. Denis.
 Grain, drying and cooling—1326—J. H. Johnson.
 Gun barrels, cleaning—1258—J. W. Post and W. McL. Cranston.
 Hooks—1172—H. Gardner.
 Insects, traps for destroying—1228—J. V. Delestre.
 Iron bedsteads—1178—G. H. and H. R. Cottam.
 Iron ships, preventing corrosion of—1209—W. P. Pigott.
 Lace, tabby weavings in—1290—J. Hartshorn.
 Land, applying sewage to—1373—G. H. Bovill.
 Leather, attaching buttons, &c., to—1260—F. Field.
 Materials, printing and finishing—1176—A. Paraf.
 Milk, preserving—1198—G. Burnard and L. Koppel.
 Minerals, cutting—1224—J. Nisbet.
 Night lights—1234—J. Jackson.
 Pipes, discharging the contents of—1330—S. Middleton.
 Plastic material, moulding—1194—T. Dixee.
 Printers' rags, treating—1383—H. Muller and W. de la Rue.
 Pyrites, treating the residues of—1381—W. de la Rue and H. Muller.
 Railway carriages, axle-boxes for—1312—F. Wise.
 Railway carriages, axles for—1377—J. E. Phillips.
 Railways, rails for—1287—J. L. Booth.
 Ratchet braces and levers—1196—T. A. Weston.

Reaping machines—1096—E. Lord and R. Norfolk.
 Revolving shutters—1170—T. Kirby.
 Rotary engine pump and water meter—1286—A. L. Bricknell.
 Rotary engines—1385—B. G. Nichol.
 Rotary motion, obtaining—1206—H. E. Newton.
 Safes—1387—J. S. Gisborne.
 Sewing machines—1391—J. W. Bartlett.
 Ships of war—472—R. Napier.
 Ships, propelling and steering—1311—J. H. Johnson.
 Shuttles—1268—R. Darragh.
 Spinning frames, steps for the spindles of—1279—G. T. Bousfield.
 Spinning machinery—1204—W. Sunderland and G. Stell.
 Steam boilers—1302—T. Green.
 Steam boilers—1375—T. Holt.
 Steam, drying—1308—W. Ireland.
 Steam engines, heating the boilers of—1240—G. Davies.
 Steel and iron—1248—W. de la Rue.
 Substances, preserving—1349—D. Nicoll.
 Surveying instrument, a new—1202—D. R. Edgeworth.
 Tapers and friction matches—1324—S. A. Bell.
 Telegraph wires, insulators for—1226—G. Davies.
 Textile fabrics, printing and dyeing—1174—A. Paraf.
 Twist drills—1164—W. Clark.
 Utensils, protecting the surfaces of—173—J. A. Nicholson.
 Valves—1230—J. Lewis.
 Ventilation—1182—E. Holden.
 Ventilators—1190—D. B. White.
 Vessels, attaching wooden planking to—1322—J. H. Ritchie, jun.
 Watch pendants—1314—G. Snowball.
 Waterclosets—1337—W. Hackett and W. Marsden.
 Waterclosets—1363—T. J. Chapman and T. Rose.
 Weaving, looms for—1222—H. Lea.
 Wool, washing—1288—J. H. Johnson.
 Yarns, spooling and copping—1042—W. Clark.

PATENTS SEALED.

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| 3045. F. Mols. | 3130. A. B. Brown. |
| 3049. E. Drucker. | 3166. O. Maggs and G. H. Smith. |
| 3057. T. Laurie. | 3185. R. F. Fairlie. |
| 3060. J. Stokes and T. Gray. | 3199. W. R. Lake. |
| 3082. T. Lancaster. | 3200. H. K. York. |
| 3067. C. S. Baker. | 3238. W. Pretty. |
| 3068. R. Howarth. | 3382. W. E. Newton. |
| 3070. J. T. Hall. | 102. W. J. Walsh. |
| 3077. J. L. Norton and J. Landless. | 110. J. C. Thompson. |
| 3081. J. Wilson. | 150. J. Stephens. |
| 3082. W. Pringle. | 187. J. McLennahan. |
| 3089. W. Johnston. | 301. C. Delafeld. |
| 3104. A. Mackie. | 391. J. Roe. |
| 3120. S. W. Wilkinson. | 473. H. E. Newton. |
| 3121. J. Prest, H. Harrison, and B. Roeber. | 480. D. Nicoll. |
| | 688. W. Richards. |

From Commissioners of Patents' Journal, May 29th.

PATENTS SEALED.

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| 3084. T. W. Dodds. | 3133. E. Whele. |
| 3086. H. Hedley and G. Ainsley. | 3213. J. Stocker. |
| 3087. W. R. Taylor. | 3274. J. T. Dawes and J. Robbins. |
| 3091. E. Scott. | 3276. R. M. Marygold & S. Fitzjohn. |
| 3092. A. J. Wright. | 602. M. & M. Myers, & W. Hill. |
| 3094. R. Edmonson. | 766. S. S. Merriam. |
| 3097. R. Cook. | 846. C. D. Abel. |
| 3113. E. C. Hodges. | 868. J. Erskine. |
| 3123. I. Holden. | |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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| 1272. W. Nunn. | 1341. C. F. Baxter. |
| 1309. H. A. Bonneville. | 1343. F. Osbourn. |
| 1292. J. Sturgeon. | 1362. W. Clark. |
| 1300. F. Potts and J. Key. | 1405. W. Clark. |
| 1331. H. C. Coulthard. | 1449. W. Clark. |
| 1338. G. Gore. | 1310. P. Leprovost. |
| 1342. T. Richardson and R. Irvine. | 1321. A. Haley. |
| 1320. W. Clark. | 1334. W. Palliser. |
| 1322. J. Munro and R. Scott. | 1350. W. Loeder. |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

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| 1311. W. Weild. | 1318. T. Wilson. |
| 1316. G. Hadfield. | 1325. A. Smith. |

Registered Designs.

Music Stool, Canterbury Whatnot or Stand for Music—April 20—4789—E. Llewellyn, 23, Bolsover-street, Portland-place, W.
 A New Game, to be called *Crescente*—May 3—4790—T. Turner, Watford, Herts.
 Angular Corrugated Ridge and Furrow Roofing Tile—May 8—4791—H. I. and C. Major, Bridgewater, Somersetshire.
 Croquet Mallet—May 11—4792—Parkins and Gotto, Oxford-street, W.
 An Improved Fastening for Umbrellas and Parasols—May 25—4793—W. Matthews, 56, Basinghall-street, City.